REDUCING LIBRARY COSTS

by DANA L. ROTH, JOHN C. COSGRIFF, and ESTELLE M. DAVIS

The cost of building and maintaining journal collections has always been high. The costs incurred in science and technology libraries, unfortunately, are even higher. Thus, the current inflation of journal subscription costs (1), coupled with a recession in library budgets, suggests that new ways must be found to develop and maintain quality collections. This may be accomplished only by critically evaluating all titles in the collection and eliminating those with low use potential.

Contrary to popular opinion (2), it appears that a significant number of journals may be eliminated from a given library without seriously inconveniencing the user group.* In a recent study (3) at the University of Surrey, it was found that "University of Surrey chemists read, cite and publish in a relatively small number of chemistry journals. The most frequently cited journals generally had the lowest cost per citation, some of the less cited journals were inexpensive and represented quite good value, but many of the least cited journals were also the most expensive. What evidence we have suggests that a similar situation obtains among the literature of other disciplines."

This is true because of an apparent hierarchy of journal quality as noted in a recent report from the National Research Council (4) which states that ". . . authors do have a tendency to submit rejected manuscripts to journals with progressively lower standards, or smaller backlogs, until the work is accepted for publication . . . the pattern of 'going down the pecking order' of journals is unfortunately well established among the more cynical or lazy.

Clear lines of demarkation between 'good' and 'bad' are always difficult to draw, but most scientists agree that, pragmatically speaking, some existing journals may difinitely be regarded as superior, some inferior. It seems not beyond the bounds of possibility that a group of scientists in each country could select, within each discipline, journals to be designate 'approved,' some perhaps even 'superior'."

With these findings in mind, it was decided to evaluate journal use in the chemistry and biology libraries at Caltech 1) to see if, in fact, there were journals with very little use, and 2) as a corollary project, to develop scientific criteria for moving older, less used, titles to remote storage.

**Editor's note:* Readers are directed to Masse Bloomfield's review of *Scientific Periodicals* by Bernard Houghton, page 16.

JOURNAL USE — RANK ORDER

For one year, beginning in May 1971, a random sample of library users agreed to record literature references for articles they were interested in reading. A total of 10,760 literature references was collected (6,476 from chemists and 4,284 from biologists). This data was then tabulated and the journals ranked according to use by each group.

Chemists indicated an interest in articles from a total of 366 different journals, with 102 of these journals accounting for 90% of the literature references. Biologists indicated an interest in articles from a total of 356 different journals, with 120 of these journals accounting for 90% of the literature references. Thus, in establishing a 90% library for either chemists or biologists, a relatively small number of journals would seem to suffice. Creating a biology-chemistry library, however, would result in an additional economy of 31 titles, so that a 90% library for biologists and chemists at Caltech would require only 191 titles.

This limited study tends to confirm "Garfield's Law," which says that the important journals in one discipline will be the same as those in related disciplines (5).

JOURNAL USE — YEAR OF PUBLICATION

During a two-month period in the fall of 1974, a random sample of library users agreed to record literature references to articles they were interested in reading.

A total of 4,232 literature references was collected and the data were analyzed by year of publication.

As might be expected, the large majority of literature, references were of very recent date. In fact, if the 90% criteria is again applied, it could, as a general rule, transfer journals published ten or more years ago to remote storage. This result is in general agreement with several older studies (6,7,8,9) of the problem.

1. "Periodical Prices: Three year Comparative Study" Clasquin, F. F. 1974 **Library Journal 99,** 2447
2. "The Core Literature of Biology . . ." Reddin, M. C. 1973 **BioScience 23,** 354
3. "What Do Chemists Read?" Panton, D. 1971 **Chemistry in Britain 7,** 18
4. **Information Handling in the Life Sciences** National Research Council, 1970
5. Citation Analysis as a Tool in Journal Evaluation" Garfield, E. 1972 **Science 178,** 471
6. "Evolving and 90% pharmaceutical library" Basile, V.A. 1970 **Special Libraries 61,** 80
7. "A periodical use study at Children's Hospital of Michigan" Smith, J.M.B. 1970 **Bulletin Med. Libr. Assoc. 58**(1), 65
8. "Survey of medical literature borrowed from the NLL" Wood, D.N. 1969 **Bulletin Med. Libr. Assoc. 57**(1), 47
9. "Analysis of recorded biomedical book and journal use in the Yale Medical Library" Strangl, P. 1967 **Bulletin Med. Libr. Assoc. 55,** 290